

ONMedU, Department of Obstetrics and Gynaecology. Elective discipline "Family Planning. Contraception". Practical lesson №3. "Modern methods of contraception II part"

**MINISTRY OF HEALTH OF UKRAINE
ODESA NATIONAL MEDICAL UNIVERSITY**

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**METHODOLOGICAL RECOMMENDATIONS FOR PRACTICAL
CLASSES IN THE ELECTIVE DISCIPLINE**

Faculty of pharmacy, 4th course

Elective discipline "**Family planning. CONTRACEPTION**"

Practical lesson 3. Topic: "Modern methods of contraception (part II)."

Methodological recommendations of practical class, EPP "Pharmacy. Industrial pharmacy", 4th course, Pharmaceutical faculty. Elective discipline: "Family planning. Contraception"

Approved:

Meeting of the Department of Obstetrics and Gynaecology

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Practical lesson 3

Topic: "Modern methods of contraception (part II)".

Aim: To systematise and deepen knowledge of modern methods of contraception. To learn the mechanism of their action, advantages and disadvantages, indications, contraindications. To learn the rules for using contraceptives. To learn the plan of examination of a patient before choosing contraceptive methods. Learn how to assess the patient and the medical criteria for the acceptability of different contraceptive methods.

Basic concepts: Intrauterine contraceptives, barrier contraception, methods of fertility recognition (natural methods), voluntary surgical sterilisation: classification, mechanism of action, advantages, disadvantages, rules for using contraceptives.

Equipment: Professional algorithms, structural and logical diagrams, tables, models, videos, results of laboratory and instrumental studies, case studies, patients, medical histories.

I. Organizational measures (greetings, checking the attendees, announcing the topic, the purpose of the lesson, motivating higher education students to study the topic).

International and national experience shows that FP through the use of modern contraceptives with consideration of risk factors is an inexhaustible reserve in preserving women's health. Reproductive health care, including the provision of family planning services and relevant information is not only considered to be the main means of preserving the health of women and men, but also belongs to the category of fundamental human rights. Every year, half a million young women worldwide die from factors related to pregnancy or its termination. International experience shows that the use of modern contraceptive methods of preventing unplanned pregnancy leads to a reduction in the frequency of induced and illegal abortions, which reduces maternal mortality by 25-50%.

Intrauterine contraceptives, barrier contraception, fertility detection methods (natural methods), voluntary surgical sterilisation are considered as modern methods of contraception and family planning. Contraceptive counselling services involve a comprehensive assessment of the patient's life circumstances and health status, taking into account her health status, life circumstances, and specific needs for reproductive health services.

Contraceptive method assumed to be effective and convenient for a woman to use, the possible risk of complications should be minimized. The contraceptive effect should be reliable, the physiology of sexual intercourse should not be disturbed and negative emotions should not arise with these methods.

One of the important conditions for the use of contraceptive methods is reliability, the possibility of long-term use, and the availability of the method.

2. Control of the reference level of knowledge (written work, written testing, online testing, frontal survey, etc.).

Knowledge requirements:

- communication and clinical examination skills;
- ability to determine the list of necessary clinical, laboratory and instrumental tests and evaluate their results;
- ability to provide counselling on the prescription of hormonal contraception.

List of didactic units:

- counselling on intrauterine contraception: mechanism of action, advantages, disadvantages;
- rules for the use of barrier contraceptives, mechanism of action, advantages, disadvantages;
- consulting on the use of natural methods of fertility recognition;
- counselling on the appointment of a voluntary surgical sterilisation method: mechanism of action, advantages, disadvantages;
- medical criteria for the acceptability of contraceptive methods (WHO);
- classification of categories of contraceptive use depending on a woman's health status (WHO);
- patient assessment;
- is a necessary examination that is carried out in a planned manner before making a decision on the use of various contraceptive methods.

3. Questions (tests, tasks, clinical situations) to test basic knowledge on the topic of the practical lessons.

Typical situational tasks:

1. Patient K., 15 years old came to the Youth Friendly Clinic for a consultation because she had started dating a young man. She had already had sexual relations with him.

Objective: How can she prevent unwanted pregnancy and STIs?

Answer: Use of condoms.

Typical test tasks:

1. When counselling patients about contraceptive use, the following issues should be discussed:

- a. Mechanism of action
- b. Time and frequency of use
- c. Side effects
- d. Fertility restoration period
- e. All of the above

2. When counselling a woman on the use of the voluntary surgical sterilisation method, the counsellor should explain the following conditions to her:

- a. When and where to do it

- b. The indications and contraindications of this method
 - c. Mechanism of action, irreversibility of the method
 - d. What are the possible complications
 - e. All of the above
3. Except which category barrier contraception as a method of contraception is suitable for?
- a. Couples who want to use a method that does not involve intercourse
 - b. Women who have a regular sexual partner
 - c. Women with hirsutism, acne
 - d. Women with endometriosis, endometrial hyperplasia
 - e. Sexual partners at high risk of STDs
4. What examinations should be carried out before using a IUD?
- a. Standard laboratory tests
 - b. Blood pressure measurement
 - c. Examination of pelvic genital organs
 - d. Pelvic ultrasonography
 - e. MRI of the pelvic organs
5. The advantages of copper-containing intrauterine contraceptives are:
- a. Prevents fertility in 100% of cases
 - b. The method does not affect breastfeeding
 - c. Can be used for an unlimited period
 - d. The method is effective one week after administration
 - e. Protects against STIs

The correct answers are: 1 - e; 2 - e, 3 - a, 4 - c, 5 - b.

4. 4. Discussion of theoretical issues

Question:

- Classification of modern contraceptive methods.
- The mechanism of action, advantages and disadvantages of the intrauterine contraceptive method.
- Indications and contraindications for the use of intrauterine contraception.
- Mechanism of action, indications, advantages and disadvantages of the barrier contraception method.
- Mechanism of action, advantages and disadvantages of fertility recognition methods (natural methods).
- Indications and contraindications for using the fertility recognition method.
- The mechanism of action, advantages and disadvantages of the voluntary surgical sterilisation method.
- Indications and contraindications for voluntary surgical sterilisation.
- Medical criteria for acceptable use of contraceptive methods (WHO).

- Conditions that affect the acceptability of using each individual contraceptive method.
- Classification of categories of contraceptive method use depending on a woman's health status (WHO).
- Assessment of a patient for family planning services.
- A necessary examination that is carried out as a matter of routine before making a decision on the use of a particular contraceptive method.

An interactive task:

We divide the students into 3 subgroups of 4-5 people each. We work in the offices of a women's clinic with gynaecological patients and give them tasks:

I subgroup - taking anamnesis, assessing the patient

Subgroup II - counselling the patient on family planning and selection of contraceptive methods

The third subgroup assesses the correctness of the answers of the first and second subgroups and makes its own corrections.

Atypical situational tasks:

1. A married patient S., 38 years old, came to the Family Planning Centre with a request to choose the most suitable contraceptive method for her. She has been sexually active since the age of 17. She has only one sexual partner - a man. She gave birth twice by caesarean section, the last delivery ended in an emergency caesarean section due to premature detachment of a normally located placenta and uterine bleeding. 7 years ago, she was treated for acute viral hepatitis B. Objective examination: general condition was satisfactory. Gynecological examination: the external genitalia are developed correctly, without inflammatory changes.

Objective: What is the most reliable and acceptable method of contraception to offer a woman?

Answer: Voluntary surgical sterilisation.

Atypical test tasks:

1. A 38-year-old woman with two children came to see a doctor. She has a history of constant migraines, was operated for an ovarian tumour 2 years ago, has varicose veins of the lower extremities. What method of contraception should not be used in this case?

- a. Voluntary surgical sterilisation.
- b. IUD.
- c. Condoms.
- d. COC.
- e. Spermicides

2. A woman with diabetes mellitus came to see a doctor to choose a contraceptive method. What contraceptive method should not be used in this case?

- a. COC
- b. IUD with copper.
- c. Surgical sterilisation.
- d. Condoms

e. Spermicides

3. A woman came to see a doctor to select a contraceptive method. She is 8 months postpartum breastfeeding. She has been menstruating for 2 months. What contraceptive methods can be used in this case?

- a. Intrauterine device.
- b. Progesterone contraceptive pills.
- c. Condoms.
- d. Spermicides
- e. All of the above

The correct answers are: 1 - d; 2 - a, 3 - e.

Test tasks KROK-2:

1. (2019) A 32-year-old woman visited an antenatal clinic with complaints of chronic pelvic pain that worsens during menstruation, dyspareunia, and bleeding before and after menstruation. The last menstrual period was 3 weeks later. Examination in the mirrors: 2 cysts 3 and 5 mm in diameter of blue-purple colour on the cervix, from which dark brown fluid is discharged. Bimanual examination: spherical uterine body, enlarged to 6 weeks of gestation, painful to palpate. Appendages on both sides are unremarkable. The doctor has been informed that the birth of a child is not planned in the near future. What is the most appropriate treatment strategy for this patient?

- A. Controlled ovarian hyperstimulation
- B. Prescribing combined oral contraceptives*.
- C. The purpose of androgens
- D. Surgical intervention
- E. Prescription of gonadotropin-releasing hormone antagonists

2. (2008) A 26-year-old woman who gave birth 7 months ago has been experiencing nausea, vomiting in the morning, and drowsiness for the past two weeks. She is breastfeeding and has not had any menstruation. She has not been warned against pregnancy. Which method should be used to clarify the diagnosis?

- A. Ultrasound examination*.
- C. Ro-radiography of the pelvic organs
- C. Palpation of the mammary glands and squeezing out milk
- D. Two-handed vaginal examination
- E. Research with mirrors

5. Topics of reports / abstracts:

- Intrauterine contraception: mechanism of action, advantages and disadvantages, indications and contraindications .
- Barrier contraception: mechanism of action, indications and contraindications, advantages and disadvantages.

- Fertility recognition methods (natural methods): mechanism of action, indications and contraindications, advantages and disadvantages.
- Voluntary surgical sterilisation: mechanism of action, indications and contraindications, advantages and disadvantages.

CLASSIFICATION OF CATEGORIES OF CONTRACEPTION METHODS USE DECIDED BY WOMEN'S HEALTH STATUS (WHO, 2009)

According to this classification, different contraceptive methods are evaluated in terms of the ratio of health risks to benefits of their use in the presence of certain conditions.

The concept of "**condition**" is defined as a reflection of a woman's **individual characteristics** (e.g. age or reproductive history) and established **somatic diseases**.

Conditions that affect the acceptability of each contraceptive method fall into one of the categories:

Categories.

1 - a condition in which there are no contraindications to using this method of contraception;

2 - a state in which the expected benefits of using this method of contraception generally outweigh the proven or theoretical risks;

3 - a condition in which the proven or theoretical risks generally exceed the expected benefits of using this method of contraception;

4 - a condition in which the use of this method of contraception is absolutely contraindicated.

The meanings of categories "1" and "4" are self-explanatory.

Category "2" means that this method of contraception is allowed to be used, but careful medical supervision is required.

Category 3 means that the method is not recommended unless more appropriate contraception is not available or is unacceptable to the patient. The method should be recommended only after a thorough clinical assessment, taking into account the severity of the condition and the acceptability of alternative contraceptive methods, and provided that access to appropriate health services is available. The patient's health status should be under special control of the doctor.

If a woman's condition cannot be examined to the appropriate extent, classification of her condition as category 3 means that the use of this method of contraception is unacceptable for this woman.

INPUT/OUTPUT ALGORITHM ON

Preparing for the introduction of the IUD

1. Tell the patient how the procedure will be performed and answer any questions she may have.
2. Provide sufficient lighting to see the cervix.
3. Wash your hands thoroughly with soap and water and dry them with a disposable paper towel.

4. Palpate the abdomen for tenderness or lumps, especially in the suprapubic region.
5. Examine the external genitalia.
6. Put on new disposable gloves on both hands.
7. Prepare instruments and materials on a sterile surface or in a container.
8. Insert the gynaecological mirror.
9. Examine the patient with a gynaecological mirror: - determine whether there are any vaginal injuries or abnormal vaginal discharge; - examine the cervix and urethra.
10. Carefully remove the mirror and place it on a tray or in the toolbox.
11. Perform a bimanual examination: - determine whether there is pain during cervical movement; - determine the size, shape and position of the uterus; - check for pregnancy; - palpate the appendages for tenderness, inflammation or tumours.
12. Perform a rectovaginal examination (if indicated): - determine the size of the uterus in retroversion (retracted) - check for any pathology.
13. Inform the woman what will be done and encourage her to ask and answer questions.

Non-contact method of insertion of the IUD

Prepare the IUD in a sterile bag: - partially open the part of the bag free of the IUD and fold its ends in different directions; - insert the white rod (plunger) into the applicator; - place the bag on a flat surface; - slide the identification card under the arms (horizontal parts) of the T-shaped applicator - hold the ends of the IUD arms with your fingers outside the bag and push the applicator forward so that the arms begin to bend downwards; - when the folded shoulders of the IUD touch the walls of the applicator, slightly slide it out from under the ends of the shoulders, while continuing to hold the shoulders with your fingers outside the bag; - lift the end of the applicator and grasp the ends of the spiral shoulders by gently turning and pushing it forward.

Introduction of the IUD (Copper T 380A)

1. Put on new disposable gloves on both hands.
2. Insert the gynaecological mirror to visualise the cervix.
3. Wipe the cervix and vagina with antiseptic twice.
4. Gently grasp the cervix with the bullet forceps.
5. Without touching the side walls of the vagina or the mirror, gently insert the uterine probe through the cervical canal into the uterine cavity in one motion.
6. Determine the length of the uterine cavity and the position of the uterus; remove the probe.
7. Take the bag with the refilled IUD and set the depth stopper to the required length without removing the IUD from the sterile bag, and then open the bag completely.
8. Remove the applicator with the IUD in it from the sterile bag without touching non-sterile surfaces; be careful not to accidentally push the VMC out with the white rod.

9. Carefully insert the loaded applicator through the cervical canal, holding it with the depth stopper in a horizontal position; insert it until it touches the cervix or resistance is felt.
10. Hold the bullet forceps and the white rod firmly with one hand and pull the applicator towards you with the other hand until it touches the thumb of the hand holding the white rod, thereby releasing the shoulders of the IUD ("pulling" technique).
11. Pull out the white rod and gently push the applicator forward until you feel a slight resistance.
12. Partially withdraw the applicator and cut the IUD threads, leaving them 3-4 cm long.
13. Pull the applicator out completely.
14. Carefully remove the bullet forceps.
15. Examine the cervix; if there is bleeding at the forceps site, apply a sterile piece of cotton or gauze to the bleeding area and press lightly and hold for 30-60 seconds.
16. Carefully pull out the mirror.
17. Wash your hands thoroughly with soap and water.
18. Make a note in the patient's medical record.
19. Dispose of the waste after insertion and removal of the IUD (used gauze, cotton wool, disposable gloves, etc.) in accordance with the requirements of applicable regulations.

Delete

1. Normally, removing the VMC is a simple procedure.
2. The healthcare professional complies with the relevant infection prevention requirements, usually this manipulation takes place on an outpatient basis.
3. The IUD is slowly removed by pulling the threads with a surgical clamp or tweezers. Scraping of the uterine cavity walls after IUD removal is contraindicated

4. Summing up the results (criteria for assessing learning outcomes).

Current control: oral questioning, assessment of communication skills during a role-play, solving situational clinical tasks, assessment of activity in the classroom, etc.

Final control: credit.

Assessment of current learning activities in a practical class:

1. Assessment of theoretical knowledge on the topic of the class:
 - Methods: questionnaire, case study, clinical problem solving
 - maximum grade - 5, minimum grade - 3, unsatisfactory grade - 2.
2. Evaluation of work with patients on the topic of the lesson:
 - Methods: assessment of: a) communication skills with the patient b) correct prescription and assessment of laboratory and instrumental studies before using contraceptives c) ability to conduct family planning counselling. d) ability to correctly select individual contraceptive methods.

- maximum grade - 5, minimum grade - 3, unsatisfactory grade - 2.

The grade for one practical lesson is the arithmetic mean of all components and can only have an integer value (5, 4, 3, 2), which is rounded according to the statistical method.

Criteria for ongoing assessment in the practical class

Assessment	Evaluation criteria
"5"	The applicant is fluent in the material, actively participates in the discussion and solution of a situational clinical problem, confidently demonstrates the skills of conducting family planning counselling and the correct prescription of laboratory and instrumental studies before using a contraceptive, expresses his/her opinion on the topic of the class, demonstrates clinical thinking.
"4"	The applicant has a good command of the material, participates in the discussion and solution of a situational clinical problem, demonstrates skills in family planning counselling and the correct prescription of laboratory and instrumental tests before using a contraceptive with some errors, expresses his/her opinion on the topic of the class, demonstrates clinical thinking.
"3"	The applicant has insufficient knowledge of the material, is not confident in discussing and solving a situational clinical problem, demonstrates skills in conducting family planning counselling and the correct prescription of laboratory and instrumental tests before using a contraceptive with significant errors.
"2"	The applicant does not have knowledge of the material, does not participate in the discussion and solution of a situational clinical problem, does not demonstrate the skills of conducting family planning counselling and the correct prescription of laboratory and instrumental studies before using a contraceptive.

5. List of recommended reading.

Basic:

1. Obstetrics and Gynaecology: in 2 books. - Book 2. Gynecology: textbook (for universities of III-IV years of study) / edited by V.I. Hryshchenko, M.O. Shcherbyna - 3rd ed.
2. Clinical Obstetrics and Gynecology: 4th Edition / Brian A. Magowan, Philip Owen, Andrew Thomson. 2021. 454 p.
3. Medical eligibility criteria for the use of contraceptive methods: 5th edition. Guidelines.-Geneva: World Health Organisation; 2015.
4. Family planning and contraception: a textbook / V.I. Boyko, N.V. Kalashnyk, A.V. Boyko and others; edited by Doctor of Medical Sciences, Professor V.I. Boyko - Sumy: Sumy State University, 2018. 223 p.

5. Oats, Jeremy Fundamentals of Obstetrics and Gynaecology [Text]: Liewellyn-Jones Fundamentals of Obstetrics and Gynaecology / J.Oats, S.Abraham. - 10th ed. - Edinburgh [etc.]: Elsevier, 2017. - VII, 375 p.
6. Dutta, Durlav Chandra. D. C. Dutta's Textbook of Gynaecology including Contraception / D.C. Dutta; ed/ Hiralal Konar. - 7th .ed. - New Delhi: Jaypee Brothers Medical Publishers, 2016. - XX, 574 p.

Additional:

1. Family Planning: A Universal Guide for Family Planning Providers. Updated 3rd edition 2018. Copenhagen: WHO Regional Office for Europe; 2021
2. Situational tasks in gynecology: a textbook. / I.Z.Gladchuk, A.G.Volyanska, G.B.Shcherbyna and others; edited by prof. I.Z.Gladchuk - Vinnytsia: Nilan Ltd. 2018. 164 p.
3. Lopez LM, Grimes DA, Schulz KF. Steroidal contraceptives: effect on carbohydrate metabolism in women without diabetes mellitus. Cochrane Database Syst Rev. 2019 Nov 12;2019(11).
4. Plu-Bureau G, Sabbagh E, Hugon-Rodin J. Hormonal contraception and vascular risk: CNGOF Contraception Guidelines. Gynecol Obstet Fertil Senol. 2018 Dec;46(12):823-833.
5. Infertility and benign diseases of the breast / NAMS of Ukraine, Ministry of Health of Ukraine, Institute of Paediatrics, Obstetrics and Gynaecology, UMSA; edited by A.G. Kornatska, T.F. Tatarchuk, O.D. Dubenko - K.; Poltava, 2017. - 271 p.
6. Influence of surgical energies on ovarian reserve during endoscopic treatment of ovarian endometriosis / T.P. Todorova // Scientific and practical conference with international participation dedicated to the 150th anniversary of V.V. Voronov "Modern theoretical and practical aspects of clinical medicine" - Odesa, 2020 - p.118.
7. The current "Clinical Protocols" approved by the order of the Ministry of Health of Ukraine on obstetrics and gynecology.

Online sources for preparation:

1. <https://www.cochrane.org/>
2. <https://www.ebcog.org/>
3. <https://www.acog.org/>
4. <https://www.uptodate.com>
5. <https://online.lexi.com/>
6. <https://www.ncbi.nlm.nih.gov/>
7. <https://pubmed.ncbi.nlm.nih.gov/>
8. <https://www.thelancet.com/>
9. <https://www.rcog.org.uk/>
10. <https://www.npwh.org/>

